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RIGGING FITTINGS FOR SHIPS

RIGGING SCREWS WITH SPLICED ROPE

RIGGING SCREWS WITH SOCKETS

Compiled and Promulgated by the
AMERICAN MARINE STANDARDS COMMITTEE

Approved May 23, 1928
as American Marine Standards H No. 6-1928 and H No. 7-1928



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FOREWORD

These standards are part of a program initiated by the American Marine Standards Committee to bring about uniformity in design and dimensions of ship fittings in common use in so far as deemed in the interest of safety and economy in ship operation and upkeep.

The types shown are commercially manufactured in a variety of forms and dimensions. The dimensions given are believed to represent closely the average dimensions of the commercial products. The standards are promulgated without prejudice to the use of commercial products of different design which possess equal merit, but it is believed that gradual adoption of these single standards would react to the benefit of all concerned.

One of the important functions of the American Marine Standards Committee is to review its publications from time to time and to so revise them, if and when deemed advisable, as to keep abreast of the developments of industry and the requirements of service. Users of these standards are asked to cooperate by reporting to the committee's secretary, division of simplified practice, Department of Commerce, Washington, D. C., any error or difficulty encountered, with suggestions for improvement.

RIGGING FITTINGS FOR SHIPS

RIGGING SCREWS WITH SPLICED ROPE; RIGGING SCREWS WITH SOCKETS

GENERAL NOTES

Materials and workmanship.

1. The turnbuckles, screws, and pins are to be of mild steel of tensile strength of 55,000 to 65,000 pounds per square inch. It is intended that the materials and workmanship shall conform to the requirements of the American Bureau of Shipping, but inspection and tests shall be required only when specified in the purchase order.

2. The dimensions tabulated correspond to sizes and strengths of ropes given in the rules of the American Bureau of Shipping; if ropes of lesser or greater strengths are used, rigging screws of corresponding strengths should be selected from the table and their end connections adapted to fittings required to suit the rope actually used.

3. Mast shrouds and stays should be served for a length of 6 feet from the lower end. Other wire ropes should be finished as follows:

(a) Those under $\frac{5}{8}$ -inch nominal diameter should be parceled and single served only in way of splices and thimbles.

(b) Those of $\frac{5}{8}$ -inch nominal diameter and over should be single served in way of splices, and wormed, parceled, and single served in way of thimbles.

4. The materials used to serve wire ropes should be as follows:

(a) Marline for wire ropes up to and including $\frac{7}{16}$ -inch nominal diameter, inclusive.

(b) Houseline for wire ropes from $\frac{1}{2}$ inch to $1\frac{1}{2}$ inches nominal diameters, inclusive.

(c) Hambroline for wire ropes from $1\frac{5}{8}$ to $2\frac{3}{4}$ inches nominal diameters, inclusive.

(The nominal diameter of wire rope is the over-all diameter.)

5. Details and dimensions of open and closed sockets for various sizes of wire rope are shown by American Marine Standard H No. 9-1926. The size of the pin required in the socket must in every instance be specified when ordering these fittings from manufacturers, as the sizes required might not be commercial standards.

6. Socketing of rope should be done according to the best practice. Zinc (not lead or babbitt) should be used for filling the socket.

7. All screw threads are to be of medium fit and conform to the American (national) standard, sponsored by the Society of Automotive Engineers and the American Society of Mechanical Engineers, and approved by the American Engineering Standards Committee in May, 1924, as standard B1a-1924. This standard is in complete accordance with the report of the National Screw Thread Commission (revised, 1924). (Miscellaneous Publication No. 61, Bureau of Standards.)

8. Pins of diameters not conforming to standard screw-thread sizes shall have their threaded end of the standard screw-thread size next below the pin size.

9. The following related American Marine Standards of rigging fittings have been promulgated by the AMSC:

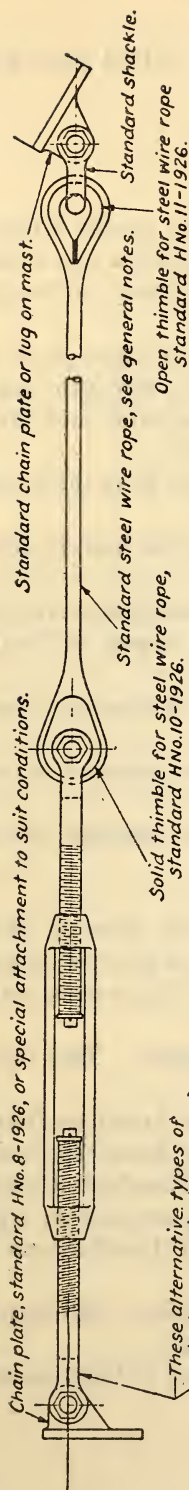
H No. 8-1926, Chain plates.

H No. 9-1926, Wire rope sockets.

H No. 10-1926, Solid thimbles for wire ropes.

H No. 11-1926, Open thimbles for wire ropes.

These standards are contained in publication AMSC 5.



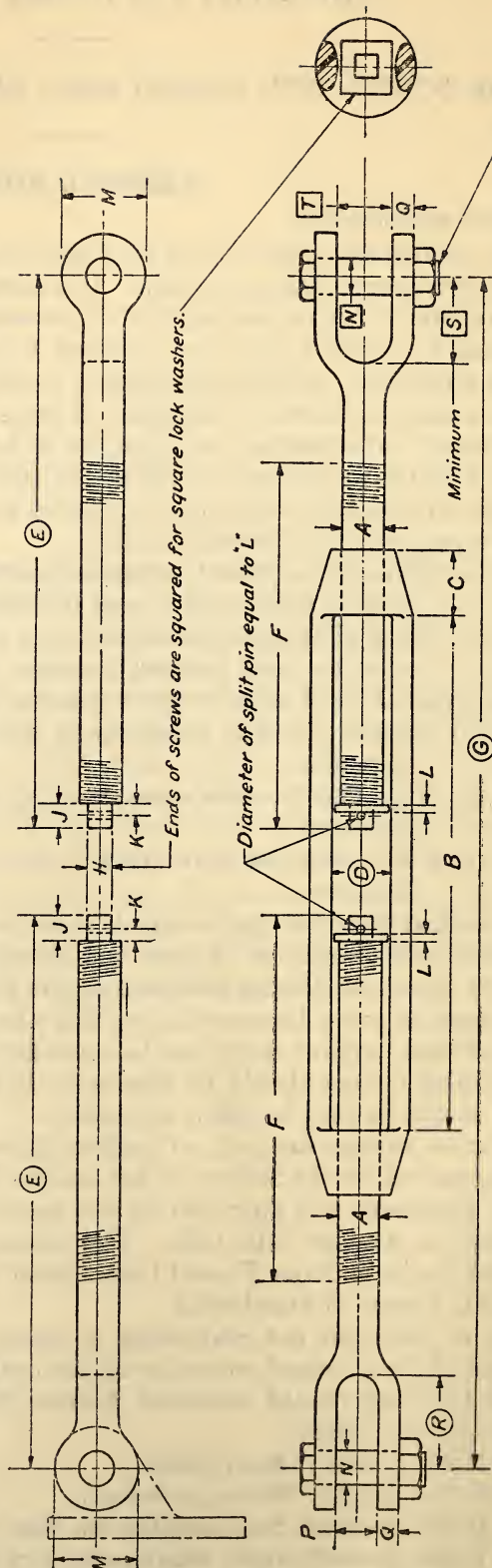
Letters within circles designate approximate dimensions.

Letters within squares designate dimensions conforming to average commercial practice but are subject to variation.

Jaws of shackles and turnbuckle jaw ends are required to fit the male fittings with a minimum of working clearances.

Sufficient thread is allowed for fitting lock nuts on ends of turnbuckles if desired. All parts of rigging are to be galvanized.

These alternative types of deck connections are optional.



STANDARD HNo. 6-1928 — Plate I

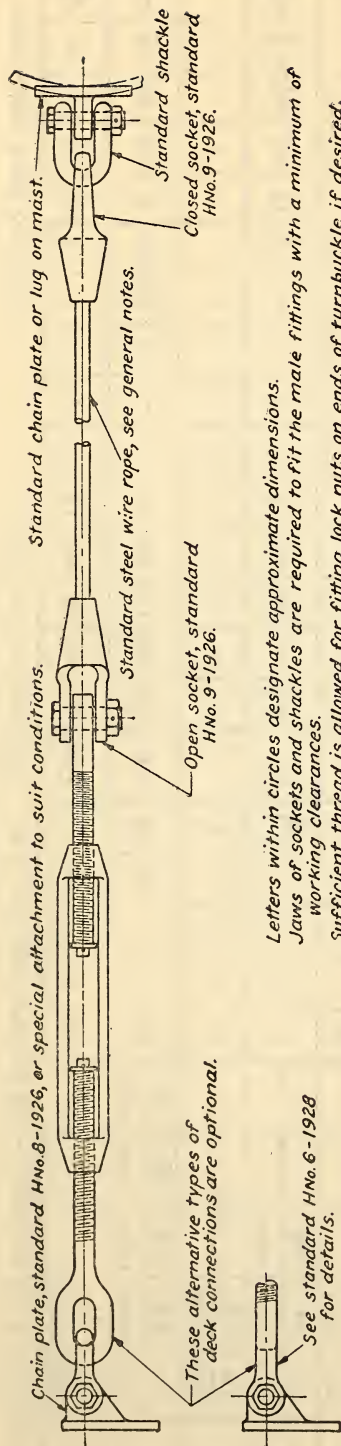
All dimensions in inches.

ROPE SIZES (CIRCUMFERENCES) IN INCHES										A		B	C	D	MINIMUM AREA OF ONE REIN (SQUARE INCHES)	E	F	G		H	J	K	L	M	N	P	Q	R	S	T
SIZE NO. OF RIGGING	ASSUMED LOAD IN POUNDS (FACTOR OF SAFETY=5)				DIA.	THDS. PER INCH																								
	1 3/8	1 1/2	1 5/8																											
1	1612	1926	2240		3/4	10	9	1 1/8	1 1/8	.21	9 1/2	6 1/2	19	27	1/2	1/2	3/16	1/8	1 1/2	5/8	3/4	1/8	3/8	1/8	1/8	3/8	1 1/8	1 5/8	1	
2	2600	3000			7/8	9	12	1 5/16	1 1/4	.29	11 3/4	8 1/4	23 1/2	31 1/2	"	"	"	"	3/4	3/4	7/8	1/2	1 1/4	1 3/4	1 1/2	1 1/4	1 3/8	1 3/8	1 1/2	
3	3400	3900	4340		1	8	"	1 1/2	1 3/8	.39	12 3/4	8 1/2	25 1/2	36 1/2	5/8	"	"	"	2	7/8	1	5/8	2	2 1/8	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	
4	4840	5320			1 1/8	7	"	1 11/16	1 1/2	.49	13 3/4	8 3/8	27 1/2	39 1/8	"	11/16	9/32	3/16	2 1/4	1	1 1/8	3/4	2 5/16	2 5/16	2 5/16	2 5/16	2 5/16	2 5/16	2 5/8	
5	5900	6440	7080		1 1/4	"	"	1 7/8	1 3/4	.62	15	9 1/4	30	40 5/8	3/4	"	"	"	2 1/2	1 1/8	1 1/4	13/16	2 1/2	2 5/8	2 5/8	2 5/8	2 5/8	2 5/8	2 5/8	
6	7700	8380			1 1/2	6	18	2 1/4	2	.91	19 1/4	12 3/4	38 1/2	54 3/4	7/8	7/8	3/8	1/4	3	1 1/4	1 3/8	"	3 1/4	3 1/4	3 1/4	3 1/4	3 1/4	3 1/4	3 1/2	
① 7	9000	9720	10480		1 3/4	5	"	2 5/8	2 1/2	1.22	20 3/4	13 3/8	41 1/2	57 3/4	1	"	"	"	3 1/2	1 1/2	1 5/8	15/16	4 3/16	4 3/16	4 3/16	4 3/16	4 3/16	4 3/16	4 3/8	
8	11240	12040			1 3/4	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"
② 9	12900	13700	14560		2	4 1/2	24	3	2 3/4	1.61	25 1/4	17	50 1/2	72 3/4	1 1/8	"	"	"	4	1 3/4	1 7/8	1 1/4	4 7/8	4 7/8	4 7/8	4 7/8	4 7/8	4 7/8	4 7/8	
10	15460	16400			2	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"
11	17340	18280	19300	20340	21360	2 1/4	"	3 3/8	3 1/4	2.11	27 1/8	17 5/8	54 1/4	76 1/4	1 1/4	"	"	"	4 1/2	1 7/8	2	1 1/2	5 3/4	5 3/4	5 3/4	5 3/4	5 3/4	5 3/4	5 3/4	
12	23560	25040			2 1/2	4	"	3 3/4	"	2.60	29	18 1/4	58	80 1/4	1 3/8	"	"	"	5	2 1/8	2 1/4	1 5/8	6 1/16	6 1/16	6 1/16	6 1/16	6 1/16	6 1/16	6 1/4	6 1/4

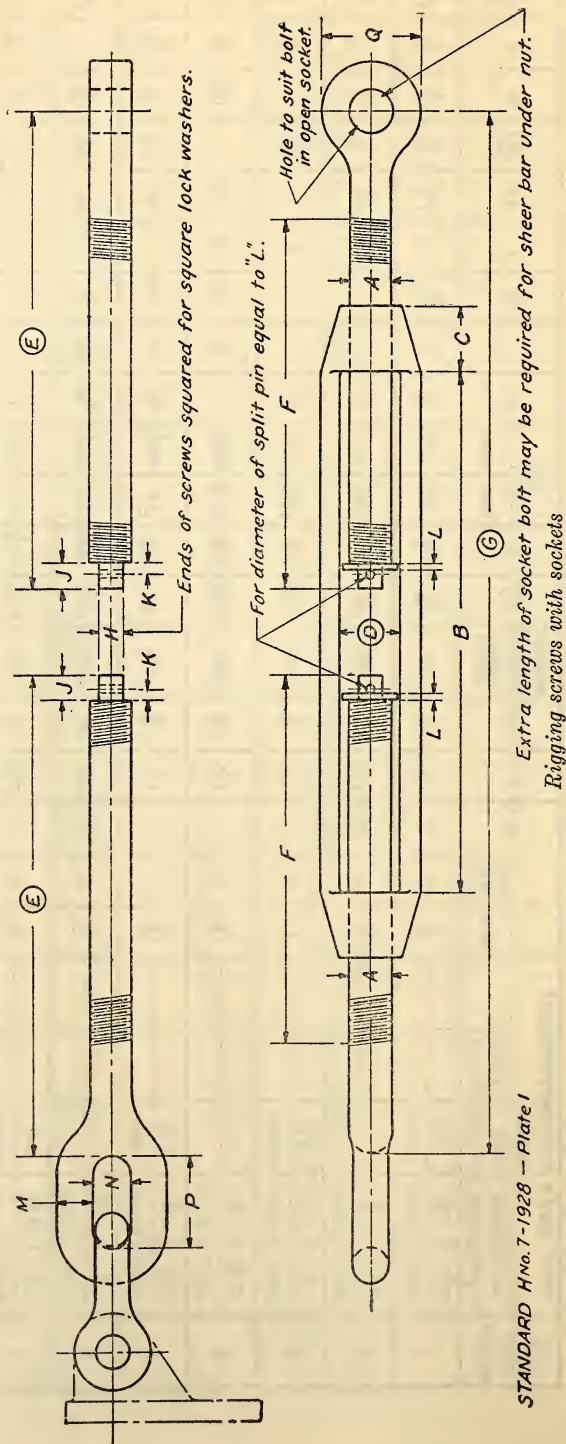
① Use chain plate size No. 8 — ② Use chain plate size No. 10 — See standard HNo. 8-1926.

Rigging screws with spliced rope

STANDARD HNo. 6-1928-Plate 2



Letters within circles designate approximate dimensions.
 Jaws of sockets and shackles are required to fit the male fittings with a minimum of working clearances.
 Sufficient thread is allowed for fitting lock nuts on ends of turnbuckle if desired.
 All parts of rigging are to be galvanized.



All dimensions in inches.

SIZE NO. OF RIGGING	ROPE SIZES (CIRCUMFERENCES) IN INCHES				A		C	①	MINIMUM AREA OF ONE REIN (SQUARE INCHES)	E	F	②		H	J	K	L	M	N	P	Q
	ASSUMED LOAD IN POUNDS (FACTOR OF SAFETY = 5)				DIA.	THOS. PER INCH						MIN.	MAX.								
1	1 $\frac{3}{8}$	1 $\frac{1}{2}$	1 $\frac{5}{8}$		3 $\frac{3}{4}$	10	1 $\frac{1}{8}$	1 $\frac{1}{8}$	.21	8 $\frac{1}{4}$	6 $\frac{1}{2}$	16 $\frac{1}{2}$	24 $\frac{1}{2}$	1 $\frac{1}{2}$	1 $\frac{1}{2}$	3 $\frac{1}{16}$	1 $\frac{1}{8}$	5 $\frac{5}{8}$	3 $\frac{3}{4}$	1 $\frac{3}{4}$	1 $\frac{1}{2}$
	1612	1926	2240																		
2	1 $\frac{3}{4}$	1 $\frac{7}{8}$			2 $\frac{1}{8}$	9	1 $\frac{5}{16}$	1 $\frac{1}{4}$	.29	10 $\frac{1}{4}$	8 $\frac{1}{4}$	20 $\frac{1}{2}$	28 $\frac{1}{2}$	"	"	"	"	3 $\frac{1}{4}$	1 $\frac{1}{8}$	2 $\frac{1}{8}$	2 $\frac{1}{8}$
	2600	3000																			
3	2	2 $\frac{1}{8}$	2 $\frac{1}{4}$		1	8	1 $\frac{1}{2}$	1 $\frac{3}{8}$	.39	10 $\frac{3}{8}$	8 $\frac{1}{2}$	21 $\frac{3}{4}$	32 $\frac{3}{4}$	5 $\frac{5}{8}$	"	"	"	1 $\frac{1}{8}$	1	2 $\frac{1}{4}$	2 $\frac{3}{4}$
	3400	3900	4340																		
4	2 $\frac{3}{8}$	2 $\frac{1}{2}$			1 $\frac{1}{8}$	7	1 $\frac{1}{16}$	1 $\frac{1}{2}$	.49	11 $\frac{5}{8}$	8 $\frac{7}{8}$	23 $\frac{1}{4}$	33 $\frac{3}{8}$	"	1 $\frac{1}{16}$	9 $\frac{9}{32}$	3 $\frac{1}{16}$	1	1 $\frac{1}{8}$	2 $\frac{5}{8}$	"
	4940	5320																			
5	2 $\frac{5}{8}$	2 $\frac{3}{4}$	2 $\frac{7}{8}$		1 $\frac{1}{4}$	"	1 $\frac{1}{8}$	1 $\frac{3}{4}$	.62	12 $\frac{1}{2}$	9 $\frac{1}{4}$	25	35 $\frac{5}{8}$	3 $\frac{3}{4}$	"	"	"	1 $\frac{1}{8}$	1 $\frac{1}{4}$	3	3
	5900	6440	7080																		
6	3	3 $\frac{1}{8}$			1 $\frac{1}{2}$	6	2 $\frac{1}{4}$	2	.91	16 $\frac{1}{2}$	12 $\frac{3}{4}$	33	49 $\frac{1}{4}$	7 $\frac{1}{8}$	2 $\frac{1}{8}$	3 $\frac{1}{8}$	1 $\frac{1}{4}$	1 $\frac{1}{2}$	3 $\frac{3}{4}$	3 $\frac{1}{4}$	3 $\frac{1}{2}$
	7700	8380																			
① 7	3 $\frac{1}{4}$	3 $\frac{3}{8}$	3 $\frac{1}{2}$		1 $\frac{3}{4}$	5	2 $\frac{5}{8}$	2 $\frac{1}{2}$	1.22	17 $\frac{1}{2}$	13 $\frac{3}{8}$	35	51 $\frac{1}{4}$	1	"	"	"	1 $\frac{1}{2}$	1 $\frac{5}{8}$	3 $\frac{3}{4}$	4 $\frac{1}{4}$
	9000	9720	10480																		
8	3 $\frac{5}{8}$	3 $\frac{3}{4}$			1 $\frac{3}{4}$	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"
	11240	12040																			
② 9	3 $\frac{7}{8}$	4	4 $\frac{1}{8}$		2	4 $\frac{1}{2}$	3	2 $\frac{3}{4}$	1.61	21 $\frac{5}{8}$	17	43 $\frac{1}{4}$	65 $\frac{1}{2}$	1 $\frac{1}{8}$	"	"	"	1 $\frac{5}{8}$	1 $\frac{1}{8}$	4 $\frac{1}{8}$	4 $\frac{3}{4}$
	12900	13700	14560																		
10	4 $\frac{1}{4}$	4 $\frac{3}{8}$			2	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"
	15460	16400																			
11	4 $\frac{1}{2}$	4 $\frac{5}{8}$	4 $\frac{3}{4}$	5	2 $\frac{1}{4}$	"	3 $\frac{3}{8}$	3 $\frac{1}{4}$	2.11	22 $\frac{3}{4}$	17 $\frac{5}{8}$	45 $\frac{1}{2}$	67 $\frac{3}{4}$	1 $\frac{1}{4}$	"	"	"	1 $\frac{7}{8}$	2 $\frac{1}{8}$	5 $\frac{5}{16}$	5 $\frac{1}{8}$
	17340	18280	19300	20340	21360																
12	5 $\frac{1}{4}$	5 $\frac{1}{2}$			2 $\frac{1}{2}$	4	3 $\frac{3}{4}$	"	2.60	24	18 $\frac{1}{4}$	48	70 $\frac{1}{4}$	1 $\frac{3}{8}$	"	"	"	2	2 $\frac{1}{4}$	6	5 $\frac{3}{8}$
	23560	25840																			

① Use chain plate size No. 8 — ② Use chain plate size No. 10 — See standard HNo. 8-1926.

Rigging screws with sockets

STANDARD HNo. 7-1923 — Plate 2

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